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AUTHOR Barker, Bruce O.; And Others
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ABSTRACT

Of 238 small K-12 rural public school districts (enrollments under 900) identified in the Arkansas study, 40 were chosen for use in gathering information to assist educators in understanding and improving education of rural residents. An 80% response rate to the 123-item questionnaire mailed to superintendents provided information on district characteristics, i.e., enrollment size, district size, special funding aid, occupation of residents, bond issues, and transportation (number of students bused, distance bused, and cost). Information gathered on district leaders (superintendents and principals) included ages, job classifications, educational levels, salaries, previous employment, hours worked per week, and major on-going concerns. District staff is discussed in terms of number of full-time teachers, number of specialists, salaries, secondary subject preparation, and recruitment. Graduating seniors (988) were addressed via superintendents' comparisons of their academic achievement with national averages (25% ranked their students above national average), number of graduates per district, number of National Merit Exam Finalists (7), and ACT or SAT scores. Finances were cited as the most serious on-going concern, followed by securing qualified teachers and improving curriculum. A summary of findings and a table showing 183 comparisons of Arkansas students to those of a national study conclude the report. (AH)

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A REPORT ON RURAL EDUCATION IN ARKANSAS

by

Dr. Bruce O. Barker, Director
High School Correspondence Study Programs
Division of Continuing Education

Dr. Ivan D. Muse, Professor of Education
College of Education

Dr. Ralph B. Smith, Associate Dean
College of Education

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A REPORT ON RURAL EDUCATION IN ARKANSAS

by

Bruce O. Barker, Ivan D. Muse, and Ralph B. Smith

In the past, relatively few educational researchers have taken an interest in the needs and problems of America's rural schools, despite the fact that a large number of America's youngsters attend schools classified as rural. In fact, depending on one's definition of rural, as many as two-thirds of the nation's 16,000 school districts are considered as rural districts and these enroll up to one-third of all public school students in the United States. Furthermore, with the decline in district consolidation and the current population shift to non-metropolitan areas, it is clearly evident that rural schools will continue to play a significant role in the future educational development of a large segment of our society. In this regard, it is very important that these schools receive current information about educational practices that will be of value in making critical school decisions.

Currently, very little data are available about rural school systems in our society. This is particularly true of the very small systems such as K-12 districts which enroll less than 1,000 students (Nachtigal, 1979).

During the 1980-81 school year, Arkansas reported a total of 370 public school districts (Education Directory - Fall 1980: Local Education Agencies). With the exception of eight districts, they were all K-12 systems. Of the 370 total districts in Arkansas, 238 enrolled less than 900 students each (64.3 percent). These are

clearly rural districts and precise data about them is lacking.

Statement of Purpose

The purpose of this study was to determine the number of K-12 public school districts in Arkansas which enroll less than 900 students each; and to gather data from a sample of these districts that will assist educators in understanding and improving the education of rural residents in Arkansas.

METHODS AND PROCEDURES

The sample used for this study consisted of school superintendents in 40 randomly selected, operating K-12 public school districts in Arkansas with an enrollment of less than 900 students each.

A one hundred and twenty-three item, self-administered questionnaire was designed by the researcher for use in collecting the data presented in this study. The questionnaire was field tested in 1982 by several rural districts and was found to be suitable for the purposes of the study.

The researcher identified all of the K-12 public school districts in Arkansas which enroll less than 900 students each (238 districts). These districts enrolled a combined total of 106,234 students for the 1980-81 school year (23.4 percent of the state's 453,043 public school students).

Forty districts were selected for a random sample. Each of the 238 districts enrolling less than 900 students was assigned a different number and the 40 selected were chosen by consulting a table of random numbers. These districts represented 16.8 percent of the study population. Questionnaires were mailed during the 1982-83

academic year to superintendents of the districts selected in the sample. Thirty-two questionnaires were later returned, representing an 80.0 percent return rate.

The Statistical Analysis System (SAS) computer program for the social sciences was used to list the frequency distributions; and to calculate the mean, standard deviation, range and standard error of mean for each of the 123 variables taken from the questionnaire.

FINDINGS

District Enrollments

Student enrollments per district ran from 154 students to 898 students, with a mean enrollment Of 460 students. When queried as to the future growth of the district, 28.1 percent of the superintendents felt the enrollment trend was to increase, while 31.3 percent expected it would remain the same, and 40.6 percent anticipated that student enrollments would decrease.

District Leadership

With reference to district leadership, 78.1 percent of the respondents were full-time superintendents and 21.9 percent served as a superintendent/principal combination.

In regards to age, 25.0 percent of the superintendents were in the 50-54 age category while 18.9 percent were between 40-44 years old and 15.7 percent were between 35-39 years old. Nine point four percent were less than 35 years old, 9.4 percent between 45-49 years old, and another 9.4 percent over 60 years old. As to number of years as superintendent, the range was one to 30 years, with a mean of 8.5 years and a standard deviation of 8.0.

Forty point six percent of the superintendents held the master's

degree, 46.9 percent held the specialist degree, and 12.5 percent held the doctorate.

The majority of superintendents' annual salaries were in the $20,000 to $24,999 range (50.0 percent). However, 34.4 percent received between $25,000 and $29,999; 9.4 percent received over $30,000 annually while two superintendents (6.3 percent) were paid less than $20,000.

As to previous employment with the district prior to appointment as superintendent, 34.4 percent had worked previously for the district while 65.6 percent came from other positions outside the district.

In relation to the number of hours worked each week, most (38.7 percent) reported a work week between 51 to 55 hours, while 25.8 percent indicated they worked between 46 and 50 hours weekly. Five superintendents (16.1 percent) reported a work week of less than 45 hours and six (19.4 percent) indicated they worked in excess of 55 hours each week.

Superintendents were asked to rank the three "major on-going challenges confronting their school district." Ranked first by 70.0 percent was the problem of "securing adequate school monies." Ranked second was the task of "securing qualified teachers" (20.0 percent) and "improving the curriculum" (20.0 percent), and ranked third was also "improving the curriculum" by another 53.3 percent of the superintendents.

Transportation

Superintendents were asked to note the percent of students enrolled in their district who were bused to school. The percentages ranged from 25 percent to 98 percent. The average was 75.8 percent.

The greatest one-way distance students were bused to school ranged from eight miles to 32 miles, with the mean at 16.1 miles and a standard deviation of 7.9.

The geographical size of the districts varied from 26 square miles to 413 square miles, with the average at 114 square miles.

Special School Funding

Superintendents were asked about state support for funding to aid small rural districts. Over 40 percent reported receipt of such aid while 59.4 percent received no such aid.

Average Family Income of School Patrons

The most frequently reported annual family gross income for families living within district boundaries was between $10,000 and $20,000 (59.4 percent). Only one superintendent reported an average family income in excess of $20,000, while twelve (37.5 percent) reported average annual incomes of less than $10,000.

Bonding

Inquiry was made as to the success or failure of the most recent bond election in the state's rural districts. Thirty districts (93.8 percent) indicated that the last bond election was passed by the voters. The dollar amount of the most recent bond ranged from $50,000 to $3,000,000, with the mean near $428,000.

District Staff

As to the number of full-time elementary teachers (K-6) within each district, the range was five to 33 teachers, with a mean of 13.9 teachers. For full-time secondary teachers (7-12), the range was six to 32 teachers, with a mean of 14.2 teachers. Twenty nine point one percent of the districts employed at least one part-time elementary

teacher while only 12.9 percent employed at least one part-time secondary teacher. The average student/teacher ratio was 16.4:1.

Inquiry was made as to the number of "specialists" employed by the rural districts. The percent of districts employing "specialists" were: special education, 90.6 percent; school counselor, 46.9 percent; media specialist/librarian, 87.5 percent; school nurse, 9.4 percent; school psychologist, 15.6 percent; subject matter specialists, 21.9 percent; vocational education director, 21.9 percent; adult education director, 3.1 percent; and community education director, 3.1 percent.

Teacher Salaries

The annual beginning salary for new teachers in the sample ran from $10,900 to $14,000. The mean beginning salary was $12.383. The top annual teacher salary ran from $12,125 to $18,000, with the mean highest salary near $14,670.

The estimated average annual salary for teachers was $13,564. The range for such salaries ran from $11,900 to $18,000. This average salary is still far below the $17,400 average annual teacher salary in the United States (both rural and urban schools) reported in the fall of 1980 by the National Center for Education Statistics.

Information regarding the number of "steps" in the salary schedule revealed a range of five to 16 "steps," with an average of 11.

In relation to salaries paid to newly hired elementary principals, the range was $11,990 to $21,000, with a mean of $17,328. However, 31.3 percent of the superintendents did not report the starting salary for new elementary principals. For secondary principals, the range was $13,321 to $25,000, with a mean of $18,682.

However, 25.0 percent of the superintendents did not report this salary.

Secondary Subject Preparations

For secondary teachers, information was sought as to the average number of different subject preparations. The range ran from one to more than six with a mean of 3.1 and a standard deviation of 1.3.

When asked about the percent of secondary teachers teaching "one or more classes" outside their subject area(s) of certification, the range was zero to only 20.0 percent. In fact, 19 superintendents (61.3 percent) reported no teachers teaching outside their major field(s). The mean percentage was less than five percent.

Teacher Recruitment

Superintendents were asked to rank the subject matter areas which posed the greatest difficulty from the standpoint of recruitment. Ranked first was "mathematics," indicated by 63.3 percent of the superintendents. Ranked second in difficulty was "sciences" (37.9 percent) and ranked third was special education (23.1 percent).

District Problems

The superintendents were asked to respond to a list of current problems with their responses ranging from "not a problem" to "a serious problem." Among problems cited, "school finances" was the single "serious problem" most frequently cited by superintendents. Other problems cited were: "teacher turnover, indifferent parents, inadequate inservice instruction, school/community relations, teacher/student rapport, unruly students, inadequate facilities, lack of instructional equipment, teacher/administration rapport, teachers moonlighting," and "teacher militancy." With the exception of

"teacher turnover" and "indifferent parents," none of these other problems seemed to pose a concern to the majority of superintendents.

With reference to problems involving students, superintendents cited "lack of student motivation" and "lack of educational goals or directions" as the most serious student problems. Other problems, ranked in order of seriousness, included: "cheating in school, sex related problems, alcoholism, drugs," and "vandalism."

Student Performance

In relation to student performance on national tests, 59.4 percent of the superintendents indicated their students' performance was "close to the national average" while 21.9 percent reported performance "above the national average" and only one superintendent (3.1 percent) rated student performance "well above the national average." Five superintendents (15.6 percent) rated student performance "below the national average."

As to number of graduates in 1981-82, rural superintendents reported a range of seven graduates to 74 graduates, with a total of 988 graduates reported for the sample and a mean of 30.9 graduates. Of the total number of graduating seniors, 32.1 percent went on to college, 11.1 percent attended technical school, and the remaining 56.8 percent sought employment. Furthermore, of the total 988 graduating seniors in 1981-82, seven (0.7 percent) were recognized as National Merit Exam Finalists, 61 (6.2 percent) scored 25 or above on the American College Test (ACT Exam), and 19 (1.9 percent) scored 1100 or above on the Scholastic Aptitude Test (SAT Exam). Hence, 8.8 percent were either recognized as National Merit Exam finalist or scored high on the ACT or SAT exams.

Education Programs

Inquiries were made as to the use of various resources to "enhance learning opportunities for students." Superintendents were asked to indicate the use of various resources from "used extensively" to "not used." The use of television for educational purposes was most frequently cited as "used extensively," however, such use was not widespread. Other resources, ranked in order of use were: "computer assisted instruction" and "correspondence courses" followed by "cooperative sharing of personnel and/or equipment, video-taped instruction, traveling teacher within the district," and "regional vocation and education service centers."

Extra Curricular Sports Offered

Superintendents reported the following sports sponsored by their district: football, 32.3 percent; basketball, 100 percent; baseball, 58.1 percent; softball, 32.3 percent; volleyball, 38.7 percent; cross country track, 12.9 percent; track and field, 54.8 percent; wrestling, 3.2 percent; tennis, 9.6 percent; and gymnastics, 6.4 percent. Neither soccer, swimming, nor golf were offered in any of the districts sampled.

Selected Course Offerings

Information provided by the superintendents indicated that foreign languages were offered as follows: Spanish, 11.5 percent; German, 3.8 percent; and French, 19.2 percent. Other curriculum offerings included: calculus, 15.4 percent; chemistry, 61.5 percent; vocational agriculture, 73.1 percent; computer science, 42.3 percent; electronics, 3.8 percent; and physics, 50.0 percent.

COMPARISON TO NATIONAL FINDINGS

The findings presented in this report were part of a nation-wide study of K-12 and 1-12 rural school districts which enroll 900 students or less (Smith, Muse and Barker, 1983). The nation-wide study made use of the same questionnaire and was mailed to 816 superintendents in the United States. Six hundred forty-two questionnaires were returned, representing a 78.6 percent response rate. A comparison of the major findings from Arkansas with those of the nation-wide study are highlighted in Table 1.

SUMMARY

1. Many rural districts in Arkansas (40.6 percent) are faced with declining enrollments. In addition, the geographical size of the average rural district in Arkansas (114 square miles) is less than half that for rural districts in the United States (245 square miles). It is likely that consolidation will continue to be an issue for those opposed to the higher per pupil expenditure of operating small schools.

2. The vast majority of rural students in Arkansas (75.8 percent) are bused to school. This is considerably higher than that reported for rural students nationwide. The typical rural student in Arkansas is bused 32 miles round trip to school.

3. State support to help provide funding to aid small school districts in Arkansas is far above the national average (40.6 percent compared to 24.2 percent). Nevertheless, almost 60 percent of the state's rural districts do not receive special funding for small schools.

4. The average annual family income for rural residents in Arkansas is much lower than the incomes reported for most rural residents in

other parts of the United States. This may account for the fact that the average bonding amount in Arkansas is just over half of that reported for comparable rural districts in the nation. Even so, the high degree to which bond issues have been passed in Arkansas is indicative of public support for rural schools.

5. Overall, the salary levels for teachers and administrators in Arkansas is well below the national average for rural districts.

6. Generally speaking, educational support services and/or specialists (eg. school counselor, nurse, psychologist, etc.) are provided much less frequently in Arkansas than in other rural districts nationwide. The same is true in regards to the offering of most extra-curricular sports programs, and selected curricular offerings such as foreign languages, computer science, calculus, physics, chemistry, and electronics.

7. The typical secondary teacher in rural Arkansas has three <u>different</u> subject preparations, but is likely teaching within his/her area(s) of certification.

8. The average student teacher ratio in Arkansas' small, rural districts is 16.4 to one.

9. Most rural superintendents in Arkansas are paid between $20,000 to $25,000 annually. An average tenure of 8.5 years as superintendent would infer a high level of job satisfaction as would the fact that over 80 percent of superintendents report that student performance on national tests of achievement is either "close to" or "above" the national average.

10. Rural superintendents in Arkansas indicate that the major challenges facing the school district are financial support, teacher recruitment, and improving the curriculum.

TABLE 1

COMPARISON OF MAJOR FINDINGS FOR K-12 RURAL SCHOOL DISTRICTS IN ARKANSAS WITH K-12 AND 1-12 DISTRICTS IN THE UNITED STATES. EACH ENROLLING 900 STUDENTS OR LESS. REPORTED BY SUPERINTENDENTS, 1983.

Variable	Arkansas	Nation
1. Average number of students in district	460	436
2. Percent of full-time superintendents	78.1	75.8
3. Percent of principal/superintendent combination	21.9	20.9
4. Average number of years service as superintendent	8.5	6.4
5. Percent of superintendents holding Bachelor's as highest degree	0	0.6
6. Percent of superintendents holding Master's as highest degree	40.6	55.4
7. Percent of superintendents holding Ed. Specialist as highest degree	46.9	31.5
8. Percent of superintendents holding Doctorate as highest degree	12.5	13.1
9. Average size of school district in square miles	114	245
10. Average one-way distance in miles which students are bused to school	16	19
11. Percent of student population bused to school	75.8	64.4
12. Percent of districts indicating that enrollment trend is to increase in size	28.1	17.9
13. Percent of districts indicating that enrollment trend is to decrease in size	40.6	36.2
14. Percent of districts indicating that enrollment trend is to remain the same	31.1	45.8
15. Percent of districts receiving state funding to aid small schools	40.6	24.2
16. Percent of families within district boundaries receiving gross annual incomes between $10,000 and $19,999	59.4	59.2
17. Percent of families within district boundaries receiving gross annual incomes between $20,000 and $29,999	3.1	22.7
18. Percent of families within district boundaries receiving gross annual incomes less than $10,000	37.5	11.5
19. Average amount of last bond issue	$428,000	$715,847
20. Average number of full-time elementary teachers in district	13.9	14.4
21. Average number of full-time secondary teachers in district	14.2	15.7
22. Average student/teacher ratio	16.4:1	14.5:1
23. Percent of districts with special education	90.6	86.6
24. Percent of districts with school counselor	46.9	79.4

TABLE 1 (continued)

	Variable	Arkansas	Nation
25.	Percent of districts having a school psychologist	15.6	33.8
26.	Percent of districts having a school nurse	9.4	45.1
27.	Percent of districts having subject matter specialists	21.9	22.0
28.	Percent of districts having an adult education director	3.1	22.0
29.	Percent of districts having a media specialist or librarian	87.5	80.9
30.	Percent of districts having a community education director	3.1	7.8
31.	Percent of districts having a vocational education director	21.9	22.0
32.	Average beginning salary for new teachers	$12,383	$12,492
33.	Average top salary for experienced teachers	$14,670	$20,506
34.	Average current salary for teachers	$13,564	$16,377
35.	Average beginning salary for new elementary principals	$17,328	$20,754
36.	Average beginning salary for new secondary principals	$18,682	$22,670
37.	Average number of "steps" to reach top of salary schedule	11.0	14.5
38.	Average number of seniors graduated per district (1981-82)	30.9	34.5
39.	Percent of graduating seniors (1981-82) attending college or university	32.1	38.6
40.	Percent of graduating seniors (1981-82) attending technical school	11.1	14.1
41.	Percent of graduates (1981-82) scoring 25+ on ACT, 1100+ on SAT, or recognized as a National Merit Exam finalist	8.8	11.0
42.	Percent of districts with football program	32.3	69.2
43.	Percent of districts with basketball program	100	100
44.	Percent of districts with baseball program	58.1	55.4
45.	Percent of districts with softball program	32.3	37.1
46.	Percent of districts with volleyball program	38.7	65.7
47.	Percent of districts with cross country track program	12.9	23.3
48.	Percent of districts with soccer program	0	7.0
49.	Percent of districts with golf program	0	22.4
50.	Percent of districts with wrestling program	3.2	25.2
51.	Percent of districts with track and field program	54.8	78.7
52.	Percent of districts with tennis program	0	16.3
53.	Percent of districts with gymnastics program	6.4	5.8
54.	Percent of districts offering Spanish	11.5	41.8
55.	Percent of districts offering German	3.8	9.7
56.	Percent of districts offering French	19.2	18.9
57.	Percent of districts offering Latin	0	3.3
58.	Percent of districts offering calculus	15.4	35.9

TABLE 1 (continued)

Variable	Arkansas	Nation
59. Percent of districts offering chemistry	61.5	79.4
60. Percent of districts offering computer science	42.3	60.3
61. Percent of districts offering electronics	3.8	13.0
62. Percent of districts offering vocational agriculture	73.1	63.1
63. Percent of districts offering physics	50.0	67.7
64. Average number of different subject preparations for secondary teachers	3.1	3.6

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